

REMARKS

The Office Action mailed October 15, 2002, has been received and reviewed. Claims 1 through 65 are currently pending in the application. Claims 34-65 are allowed. Claims 1-4 and 9 stand rejected. Claims 5-8 and 10-33 have been objected to as being dependent upon rejected base claims, but the indication of allowable subject matter in such claims is noted with appreciation. New claims 66 through 421 have been added and contain no new matter. Reconsideration of the application is respectfully requested.

Information Disclosure Statement

Applicants note the filing of an Information Disclosure Statement herein on August 29, 2001 and note that no copies of the PTO-1449 forms were returned with the outstanding Office Action. Applicants respectfully request that the information cited on the PTO-1449 (which is the same as that of record to that date in the parent application hereto) be made of record herein.

Preliminary Amendment

Applicants' undersigned attorney notes the filing herein of a Preliminary Amendment on November 15, 2001, which filing was not acknowledged in the outstanding Office Action. Should the Preliminary Amendment have failed for some reason to have been entered in the Office file, Applicants' undersigned attorney will be happy to have a true copy thereof hand-delivered to the Examiner.

35 U.S.C. § 102(e) Anticipation Rejections

Anticipation Rejection Based on U.S. Patent 5,733,800 to Moden

Claims 1-4 and 9 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Moden, U.S. Patent 5,733,800. Applicants respectfully traverse this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor*

Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The Examiner cites Moden for its disclosure with respect to figures 2A and 2B. These figures illustrate prior art pre-molding and post-molding positions of encapsulant during a transfer molding operation using a typical mold apparatus. (Moden, col. 5, lines 59-61). The mold apparatus includes an upper 10 and lower 12 half that come together to form a cavity 44 around a die assembly 100. A heated pellet of resin mold 30 is placed beneath a plunger 32 and forced into an opening 34. The plunger 32 melts the pellet 30 and forces it through runners 38, 40 toward the die assembly 100. Ideally, this method would encapsulate the die assembly 100. However, Moden notes that the "[e]ncapsulant flow in the mold cavities 44 is demonstrably non-uniform". (Moden, col. 6, lines 30-31).

By way of contrast with Moden, claim 1 of the presently claimed invention recites a "method for applying viscous material to at least one semiconductor component, said method comprising providing a viscous material pool containing viscous material, said viscous material pool shaped such that an exposed surface of the viscous material is located in a precise location and including at least one upward facing opening, said at least one upward facing opening exposing at least said exposed surface of said viscous material; aligning at least one semiconductor component over said viscous material pool; and wetting a specific location of said at least one semiconductor component with said viscous material." Applicants respectfully submit that Moden fails to disclose, either inherently or expressly, every element of the presently claimed invention.

Applicants submit that Moden fails to teach, either expressly or inherently, providing a viscous material pool containing viscous material, said viscous material pool shaped such that an exposed surface of the viscous material is located in a precise location and including at least one upward facing opening, said at least one upward facing opening exposing at least said exposed surface of said viscous material. Applicants submit that instead of a viscous material pool containing viscous material, Moden discloses using pellets of resin 30 that are individually melted by a plunger 32 and forced by the plunger 32 through runners 38, 40. As the plunger 32 covers the pellet 30, Moden also fails to disclose at least one upward facing opening exposing at least said exposed surface of said viscous material as recited in claim 1 of the presently claimed

invention. Further, the melted pellet 30 is not provided to a precise location. Instead, Moden discloses that the encapsulant flow is non-uniform and is intended to encapsulate the entire die assembly 100. (Moden, col. 6, lines 30-31; Figs. 4A & 4b).

Moden also fails to disclose, either expressly or inherently, “aligning at least one semiconductor component over said viscous material pool; and wetting a specific location of said at least one semiconductor component with said viscous material” as recited in claim 1 of the presently claimed invention. Instead, Moden discloses placing a die assembly 100 in a cavity 44 laterally from runner 38, 40 containing resin 30. (Moden, Figs. 2 A and 2B). Further, Moden discloses that the resin 30 contacts (encapsulates) all portions of the die 102 and lead frames 104. *Id.* Similarly, Moden fails to disclose “wetting a specific location of said at least one semiconductor component”. Instead, Moden discloses the prior art method which encapsulated an entire die assembly 100 rather than a specific location of at least one semiconductor component.

As Moden fails to disclose, either expressly or inherently, every element of claim 1 of the presently claimed invention, applicants respectfully submit that claim 1 is not anticipated by Moden. Thus, claim 1 is allowable.

Claims 2 through 33 are each allowable as depending, either directly or indirectly, from allowable claim 1.

Claim 4 is further allowable as Moden fails to disclose, either expressly or inherently, placing at least one of a lead finger, bus bars, and a die attach paddle above said viscous material pool. Instead, Moden discloses placing an entire die assembly 100 to the side of melted resin 30.

Claim 9 is further allowable as Moden fails to disclose, either expressly or inherently, pumping the viscous material into the viscous material pool. Instead, Moden discloses that a plunger 32 melts the pellet resin 30 and forces it into runners 38, 40.

Objections to Claims 5-8 and 10-33

Applicants note with appreciation that claims 5 through 8 and 10 through 33 stand objected to as being dependent upon rejected base claims, but are indicated to contain allowable subject matter and would be allowable if placed in appropriate independent form. Applicants

respectfully submit that dependent claims 5 through 8 and 10 through 33 are allowable in dependent form. Applicants also submit herewith new claims 66 through 421. New independent claims 66, 98, 129, 159, 188, 216, 243, 269, 294, 318, 341, 363, 384 and 403 respectively correspond to dependent claims 5, 6, 8, 10, 12, 13, 14, 15, 20, 26, 27, 29, 30 and 31 written in independent form. All new dependent claims are similar to dependent claims 2 through 33. Individual dependant claims have been removed to eliminate redundancy. As the Examiner previously indicated that claims 5, 6, 8, 10, 12, 13, 14, 15, 20, 26, 27, 29, 30 and 31 would be allowable if placed in appropriate independent form, applicants submit that new claims 66 through 421 are in condition for allowance.

Allowable Subject Matter

Applicants note with appreciation the indication that claims 34 through 65 are allowable.

CONCLUSION

Claims 1 through 421 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,



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